

## SYSTEM AND METHOD FOR COMPRESSING DATA

### Abstract of the Disclosure

Systems, devices and methods are provided to compress data, and in particular to code and decode data. One aspect of the present subject matter is a data structure. The data structure includes a field representing a decoding structure to decode canonical Huffman encoded data, and a field representing a symbol table. The decoding structure includes a field representing an accelerator table to provide a  $2^N$ -deep direct-index lookup to provide high-frequency symbols for high-frequency data and to provide bracketing indices for low-frequency data. The decoding structure also includes a field for a binary search table to provide a low-frequency symbol index using a binary search bounded by the bracketing indices provided by the accelerator table. The symbol table is adapted to provide a symbol associated with the low-frequency index.

15